



January 13, 2011

Mr. John Davidson, Senior Planner
City of San Jose Planning Division
200 East Santa Clara Street
San Jose, California 95113-1905

PDC99-044 /
pp 01-079

RE: Legacy America Center Burrowing Owl Habitat Monitoring Report

Dear Mr. Davidson:

On behalf of the landowner and permittee, Legacy Partners Commercial, we are enclosing a copy of the Year 9 Annual Monitoring Report for the burrowing owl mitigation site at the Legacy America Center project site in San Jose, California. This report has been written as specified in the *Legacy America Center Burrowing Owl Habitat Management Plan* prepared in 2000 by H.T. Harvey and Associates.

Annual maintenance and monitoring of the owl mitigation site has taken place for nine years (2002-2010) as required in the *Management Plan*. During these nine years owl burrows have been cleaned and/or repaired as needed, mowing of weeds to improve adjacent habitat conditions has been conducted, and owl perches have been installed or replaced when damaged. Wildlife usage of the site has been recorded during maintenance visits. An annual report has been prepared each of the nine years. There is evidence that burrowing owls have occupied these burrows at times over the past four years, but do not appear to be using the site for breeding.

Upon completion of this Year 9 Annual Monitoring Report, we are recommending that the monitoring phase of this mitigation effort has been completed. We are requesting that the City provide a very brief letter signing off on the completion of this mitigation obligation. We will continue the annual monitoring on Legacy Partner Commercial's behalf as a good faith effort until we receive confirmation from the City that all mitigation obligations have been fulfilled and no further actions are needed related to burrowing owl mitigation monitoring at the America Center site.

Please call me if you have any questions or require further clarification of any issues covered in this report. Thank you for your assistance with this project.

Sincerely,

A handwritten signature in blue ink, appearing to read "Tom Fraser", with a stylized flourish at the end.

Tom Fraser
Principal

cc: Kellie St. Clair, Legacy

logged in & scanned

Burrowing Owl Mitigation Monitoring Year 9 Annual Report

LEGACY AMERICA CENTER OPEN SPACE PRESERVE SAN JOSE, SANTA CLARA COUNTY CALIFORNIA

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December 2010



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1.0 INTRODUCTION

In 2002, Legacy Partners ("Legacy") constructed a Burrowing Owl (*Athene cunicularia*) mitigation habitat site on the Legacy Terrace Development Open Space Preserve, also known as America Center. The project site is located west of the intersection of Gold Street and Channel Drive in the Alviso District of the City of San Jose, Santa Clara County, California (Figure 1). San Tomas Aquino Creek is approximately 200 feet south of the mitigation site, and a service road lies between the mitigation site and the San Francisco Bay salt ponds to the north.

The Burrowing Owl mitigation habitat consists of 25.3 acres of open space preserve managed as foraging habitat, and includes 6.5 acres of potential Burrowing Owl breeding habitat. Twenty-six artificial burrows are located in the mitigation area (Section 5.1), situated around two earthen mounds approximately four feet in height and 150 feet in length.

2.0 METHODS

According to the *Draft Burrowing Owl Habitat Management Plan*, prepared by H.T. Harvey & Associates in July 2000, nesting habitat for Burrowing Owl should be monitored by a qualified biologist three to four times annually; minimally, once during the non-nesting season (September through January), and three times during the nesting season, preferably once at the beginning of the season (March-April), once at the height of the season (May-June), and once at the end of the season (July-August). All artificial burrows must be maintained on an annual basis prior to the start of the nesting season in February. An annual report is submitted to the City of San Jose at the end of each year.

Monitoring events consist of performing reconnaissance level surveys to determine the presence or absence of burrowing owls. Prior to each site visit, a search of the California Department of Fish and Game Natural Diversity Database (CNDDB) is conducted to determine if Burrowing Owl Occurrences have been reported within or adjacent to the Legacy Terrace Development Open Space Preserve. During each site visit, the Burrowing Owl breeding habitat is initially observed from a distance with the aid of a spotting scope or binoculars. The site is then traversed on foot and observations are made around the artificial burrows for signs of potential use, such as owl pellets, owl feathers, prey remains, eggshell fragments, and/or excrement. Observations are also made for signs indicating owl absence such as spider webs and debris inside the burrow entrances.

Maintenance is conducted during monitoring visits as necessary. Each burrow is inspected, and burrows requiring cleaning or clearing are excavated, cleaned, and reinstalled. Vegetation surrounding the burrows is trimmed or removed by hand throughout the year. Minor repairs, such as replacing and re-labeling posts and clearing surface debris, are also performed.

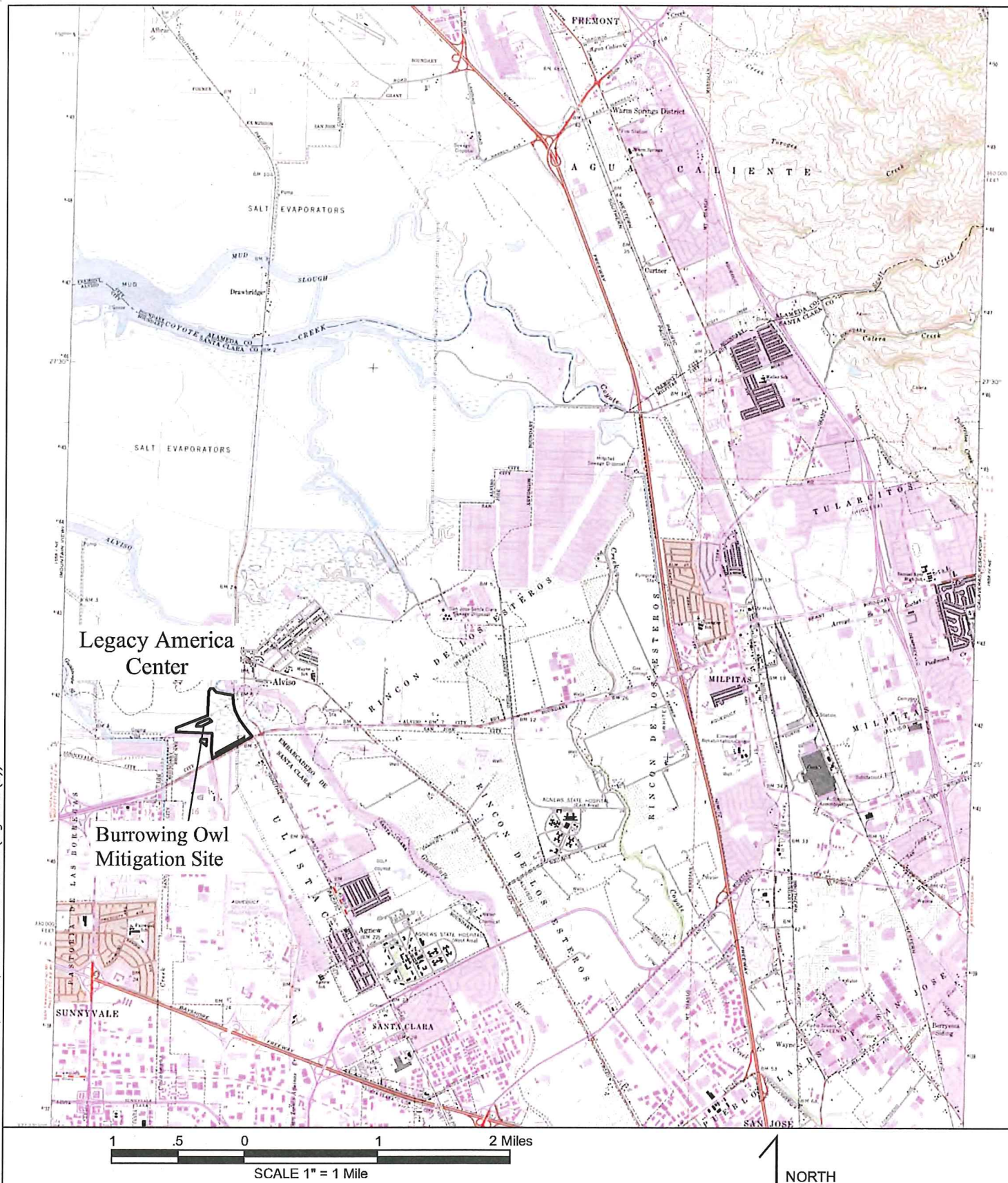


Figure 1

Legacy America Center
Site Location Map
San Jose, Santa Clara County, CA

Directions: Highway 237, north of Great America Pkwy Exit.
Basemap: USGS DRG Milpitas Quad

1.0 INTRODUCTION

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The Burrowing Owl mitigation habitat consists of 25.3 acres of open space preserve managed as foraging habitat, and includes 6.5 acres of potential Burrowing Owl breeding habitat. Twenty-six artificial burrows are located in the mitigation area (Section 5.1), situated around two earthen mounds approximately four feet in height and 150 feet in length.

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Maintenance is conducted during monitoring visits as necessary. Each burrow is inspected, and burrows requiring cleaning or clearing are excavated, cleaned, and reinstalled. Vegetation surrounding the burrows is trimmed or removed by hand throughout the year. Minor repairs, such as replacing and re-labeling posts and clearing surface debris, are also performed.

3.0 RESULTS

Burrowing Owl monitoring was performed by WRA biologists Spencer Badet, Bill Stagnaro, or Jason Yakich on March 10, April 29, July 20, November 15, and December 10, 2010. Maintenance activities were also performed during most site visits.

One Burrowing Owl was observed using the created habitat at the Legacy Terrace Development Open Space Preserve on December 10, 2010. Likely evidence of site usage by this species was also found in the same area on July 20 and November 15, 2010 (Section 4.2), although no owls were seen on these days. The presence and behavior of the owl observed December 10 suggest that the Legacy Terrace Development Open Space Preserve provides suitable habitat for this species. However, Burrowing Owl did not breed at the site in 2010.

Vegetation removal was performed during most site visits in 2010 by hand or using a gasoline-powered string trimmer. Legacy personnel mowed the site in early May 2010 following a survey conducted to ensure that owls were not using the site during the mowing. The site was mowed again in September, during the non-breeding season.

The America Center site was relatively quiet in 2010. The majority of construction is complete, although the buildings have remained vacant. Thus, relatively little human visitation, noise, or other activities that could potentially disturb wildlife occurred within or adjacent to the Legacy Terrace Development Open Space Preserve in 2010.

4.0 PROJECT SUMMARY

4.1 Artificial Burrows

Twenty-six artificial burrows are currently present at the Legacy Terrace Open Space Preserve, and these burrows will remain in place for the foreseeable future. As shown in Table 1, 24 burrows were originally installed in 2002, after which two burrows were removed and four were added.

Table 1. Summary of burrow installation and removal at the Legacy Terrace Development Open Space Preserve

Date	Action	Burrow number	Comment
2002	Burrows installed	1 - 24	Burrows installed following original design scheme.
March 29, 2006	Burrows installed	25 - 27	Burrows installed at top of mounds, where they may be more attractive to Burrowing Owl and less prone to flooding.
July 5, 2007	Burrow installed	28	Double-chambered burrow installed on top of mound.
January 24, 2008	Burrow removed	1	Burrow removed due to sub-optimal entry tube and erosion near burrow entrance.
Dec. 12, 2008	Burrow removed	24	Burrow removed due to sub-optimal entry tube and erosion near burrow entrance.

4.2 Burrowing Owl Presence

The sighting on December 10, 2010 marks the first time that Burrowing Owl has been seen at the Legacy Terrace Development Open Space Preserve since its construction in 2002. However, evidence of site usage by Burrowing Owl has been found at the site since 2007, including on July 20 and November 15, 2010. Owls regurgitate “pellets” of indigestible food, including the exoskeletons of insects and occasionally fur and bones from small mammals. These distinctive pellets, along with feathers and excrement, have been found near the mitigation burrows. All evidence of site usage by Burrowing Owl indicates that breeding has not occurred at the mitigation site, but that one or more owls have used the site during the non-breeding season every year starting in 2007.

Table 2. Indications of Burrowing Owl presence at the Legacy Terrace Development Open Space Preserve.

Date	Indications of Burrowing Owl Presence	Location
July 5, 2007	2 pellets and whitewash found.	Burrow 26
October 15, 2007	Scattered pellets found around the site, not concentrated around a particular burrow.	Burrows 5, 6, 8, and 25
December 12, 2008	Scattered pellets found around the site, not concentrated around a particular burrow.	Burrows 4, 6, 15, and 27
October 9, 2009	1-2 pellets found.	Burrow 27
December 15, 2009	1 pellet found.	Burrow 15
July 20, 2010	1 pellet found.	Burrow 22
November 15, 2010	2 pellets, feathers, and whitewash found.	Burrow 21
December 10, 2010	One adult male Burrowing Owl observed.	Burrow 26

5.0 CONCLUSION AND RECOMMENDATIONS

Burrowing Owl was sighted at the Legacy Terrace Development Open Space Preserve in 2010, for the first time since site construction in 2002. This sighting, combined with evidence of consistent site use over a period of four years, shows that mitigation through creation of suitable Burrowing Owl habitat has been successful.

Burrowing Owl breeding has not been recorded at the Legacy Terrace Open Space Preserve, although there is a high potential that breeding could occur there in the future. The fact that one or more owls have discovered and used the site suggests that this species may select the Legacy Terrace Development Open Space Preserve as a breeding site.

3.0 RESULTS

Burrowing Owl monitoring was performed by WRA biologists Spencer Badet, Bill Stagnaro, or Jason Yakich on March 10, April 29, July 20, November 15, and December 10, 2010. Maintenance activities were also performed during most site visits.

One Burrowing Owl was observed using the created habitat at the Legacy Terrace Development Open Space Preserve on December 10, 2010. Likely evidence of site usage by this species was also found in the same area on July 20 and November 15, 2010 (Section 4.2), although no owls were seen on these days. The presence and behavior of the owl observed December 10 suggest that the Legacy Terrace Development Open Space Preserve provides suitable habitat for this species. However, Burrowing Owl did not breed at the site in 2010.

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The America Center site was relatively quiet in 2010. The majority of construction is complete, although the buildings have remained vacant. Thus, relatively little human visitation, noise, or other activities that could potentially disturb wildlife occurred within or adjacent to the Legacy Terrace Development Open Space Preserve in 2010.

4.0 PROJECT SUMMARY

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The following management actions are recommended in order to optimize the Legacy Terrace Development Open Space Preserve for Burrowing Owl in the future:

1. Keep grass and other vegetation as low as possible. Burrowing Owl prefers open grassland habitat with good visibility for long distances. The Burrowing Owl breeding season, from February 1 to August 31, is also the peak of the vegetation growing season in California. Thus, it is important to keep the vegetation at the mitigation site low during this period without disturbing owls that may use the site for nesting. Currently, Legacy implements a well-defined schedule to ensure that grasses are mowed just before the owl breeding season starts, and as needed in order to keep vegetation as short as possible throughout the breeding season. This ensures vegetation is removed from the burrow entrances one or more times per year, outside the breeding season. Mowing or other maintenance performed during the Burrowing Owl breeding season is done in consultation with a qualified biologist, who first conducts a survey of the area.

2. Human activity should be controlled. The level of human activity at America Center is difficult to predict. In a best-case scenario, humans and vehicles would come and go from the America Center parking lot without creating a large amount of noise and without disturbing the mitigation area. However, excessive noise, activity, or intrusions could discourage owls from using the mitigation site. Legacy has installed boulders as well as planted shrubs, trees, and groundcover to provide a physical barrier that signals the mitigation area is off-limits. "Keep Out/Owl Mitigation Site" signage has also been installed to provide further site buffering at the edge of the development closest to the mitigation site. Once America Center is occupied, noise and activity levels in the parking area are not anticipated to be excessive.

The fact that owls have used the mitigation site suggests a strong possibility that owls will continue to do so in the future as long as the site is properly managed. The 26 burrows at the mitigation site will remain in place unless management actions require otherwise. The burrows will continue to provide potential habitat for Burrowing Owl for a number of years to come. This report summarizes the ninth year of maintenance and monitoring on the Legacy Terrace Development Open Space Preserve.

6.0 REFERENCES

- California Burrowing Owl Consortium. 1993. Burrowing Owl Survey Protocols and Mitigation Guidelines. Sacramento, California.
- California Department of Fish and Game. 2008. Natural Diversity Database (CNDDB), Wildlife and Habitat Data Analysis Branch. Sacramento.
- H.T. Harvey & Associates. 2000. Draft Legacy Terrace Development Burrowing Owl Habitat Management Plan. San Jose, California.
- Smith, B.W. and J.R. Belthoff. 2001. Effects of nest dimension on the use of artificial burrow systems by burrowing owls. *Journal of Wildlife Management* 65:318-326
- WRA, Inc. 2010. Year 8 Legacy America Center Burrowing Owl Mitigation Monitoring Report. San Rafael, California.
- WRA, Inc. 2009. Year 7 Legacy America Center Burrowing Owl Mitigation Monitoring Report. San Rafael, California.
- WRA, Inc. 2008. Year 6 Legacy America Center Burrowing Owl Mitigation Monitoring Report. San Rafael, California.
- WRA, Inc. 2007. Year 5 Legacy America Center Burrowing Owl Mitigation Monitoring Report. San Rafael, California.
- WRA, Inc. 2006. Year 4 Legacy America Center Burrowing Owl Mitigation Monitoring Report. San Rafael, California.
- WRA, Inc. 2005. Year 3 Legacy America Center Burrowing Owl Mitigation Monitoring Report. San Rafael, California.
- WRA, Inc. 2004. Year 2 Legacy America Center Burrowing Owl Mitigation Monitoring Report. San Rafael, California.

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APPENDIX A

FIELD NOTES

Field Notes

Jason Yakich, Wildlife Biologist, WRA Inc.

LEGACY PROJECT, BURROWING OWL ARTIFICIAL BURROW MONITORING (13004)

Date/time: March 10, 2010 6:55 - 10:35 am

Purpose: Monitor BUOW burrows and perform maintenance

Weather: Clear (no clouds), wind 7 - 10 mph throughout, ~50°F

Monitors: Jason Yakich

Methods: The Burrowing Owl mitigation area was approached on foot from the parking lot to the east. Upon arrival, a visual survey for Burrowing Owl (BUOW) around the mounds containing artificial burrows and the remainder of the greater capped landfill area, using binoculars (8x42). The entrances to all artificial burrows were carefully examined for any sign of BUOW use (i.e., feces stains, regurgitated pellets, feathers). Vegetation was cleared within approximately six feet of each burrow opening with a string trimmer and by hand, with the exception of burrows 7 - 9 and 13. Burrow entrances were cleared of soil, vegetation, cobwebs and any other debris by hand. Several photos of the mitigation area and artificial burrows were taken.

Results: BUOW was not observed at the site, and no BUOW sign was detected. The table below summarizes the findings relevant to individual burrows.

Result / Status	Burrow #
Entrance clear	2, 7, 21, 25 - 28
Entrance and burrow flooded (w/ standing water)	3 - 5, 12, 22
Entrance blocked by adjacent vegetation	5, 6, 10, 11, 13 - 20, 22
Entrance blocked by earth	8
Entrance blocked by cobwebs	6, 9, 10, 23
(Previously removed)	1, 24

The majority of grasses and other vegetation in the vicinity of the burrows was approximately six to twelve inches in height prior to cutting, and less than two inches after, allowing good visibility at the entrances (an important habitat component for BUOW). Vegetation at greater distance from the burrow entrances varied in height, with the tallest weeds (e.g. *Brassica nigra*, mustard) standing several feet in height.

Also observed around most of the vicinity of the burrows was mammalian digging/rooting sign, likely that of skunks.

Other Wildlife Observed At and Adjacent To Site: House Finch, American Kestrel, Western Gull (flyover), California Gull (flyover), Black Phoebe (perched on burrow markers), Say's Phoebe (perched on burrow markers), Tree Swallow, Barn Swallow.

APPENDIX A

FIELD NOTES

Field Notes

Jason Yakich, Wildlife Biologist, WRA Inc.

LEGACY PROJECT, BURROWING OWL ARTIFICIAL BURROW MONITORING (13004)

Date/time: April 29, 2010 6:00 - 8:05 am

Purpose: Monitor BUOW burrows and perform maintenance

Monitors: Jason Yakich

Methods: Arrived during twilight to facilitate the detection of any Burrowing Owl (BUOW) foraging at the site. The Burrowing Owl mitigation area was approached on foot from the parking lot to the east. Upon arrival, a visual survey for Burrowing Owl (BUOW) around the mounds containing artificial burrows and the remainder of the greater capped landfill area, using binoculars (8x42). From 6:20 - 6:40, the mound to the NNE of the mitigation area was also surveyed as it appeared to provide the best BUOW habitat in the vicinity. Subsequently, the entrances to all artificial burrows were carefully examined for any sign of BUOW use (i.e., feces stains, regurgitated pellets, feathers). Burrow entrances were cleared of soil, vegetation, cobwebs and any other debris by hand. Several photos of the mitigation area and artificial burrows were taken. In addition, a general breeding bird survey was conducted across the entire mitigation area to assess the feasibility of mowing the entire area to control vegetation height.

Results: BUOW was not observed at the site or anywhere else surveyed in the area, and no BUOW sign was detected. The table below summarizes the findings relevant to individual burrows.

Result / Status	Burrow #
Entrance clear	6, 10 - 12, 14 - 22, 25 - 28
Entrance blocked by adjacent vegetation	2, 7 - 9, 13
Entrance blocked by earth	7, 8
Entrance blocked by cobwebs	9, 23
(Previously removed)	1, 24

The grasses and other vegetation in the vicinity of the burrows were highly variable in height, ranging from only a few inches to over two feet; the areas with the shortest vegetation were generally those whose vegetation was cut down during the previous March 2010 visit. No vegetation was cut during this visit. Taller vegetation (e.g. approximately four feet in height) such as mustard was present in some portions of the mitigation area. No indication of breeding bird activity was found anywhere in the mitigation area. Thus, mowing the entire area by America Center landscaping staff, to reduce vegetation height (improving habitat quality for BUOW), will be recommended. No ground squirrels or natural (i.e. squirrel-created) burrows were observed within the mitigation area.

Other Wildlife Observed At Site: American Kestrel, Western Gull (flyover), California Gull (flyover), Cliff Swallow, Barn Swallow, Vaux's Swift, White-throated Swift, Black-tailed Jackrabbit

Field Notes

Spencer Badet, WRA, Inc. Biologist

LEGACY PROJECT, BURROWING OWL ARTIFICIAL BURROW MONITORING (13004)

Date: July 20, 2010

Purpose: Monitor BUOW burrows and perform maintenance.

Weather: Breezy, cool, overcast, ~60F.

Monitors: Spencer Badet

Methods: Burrows were approached on foot from the parking lot to the east. A visual survey for Burrowing Owl (BUOW) was conducted using binoculars, both around the artificial burrows and the larger foraging area on top of the capped landfill. Burrow entrances were carefully examined for any sign of use (i.e., feces stains, regurgitated pellets, feathers). Vegetation was cleared within 10-20 feet of the burrow openings by hand and with a string trimmer. Burrow openings were cleared of vegetation and debris by hand.

Results: BUOW was not observed at the site, however one possible BUOW pellet composed of insect exoskeletons was found near the entrance to burrow 22. The pellet appeared to be at least 1-2 weeks old. The pellet was smaller than pellets previously found at the site, and its small size opens the possibility that it was a pellet from another predatory bird such as Loggerhead Shrike. A Loggerhead Shrike was observed on a transmission tower on July 20, 2010 approximately 110m northeast of the mitigation area. Although shrikes were always known to be present in the area, this was the first time that one was observed onsite.

Grass at the mitigation site was mowed in May 2010, and the majority of vegetation is less than 6" tall. However, many grass inflorescences and herbs such as *Brassica nigra*, *Dittrichia graveolens*, *Lactuca serriola*, and *Sonchus spp.* had re-grown to a height of 2-4 feet following the mowing. Large plants were removed by hand, and a string trimmer was used to cut down the remaining vegetation near the burrow entrances, leaving good visibility around the burrows (believed to be ideal conditions for burrowing owl).

As noted on previous visits, there is some suggestion that mammals are using the artificial burrows, including a lack of cobwebs in many of the burrow openings, tracks leading into the openings, mud and debris tracked into the entry tubes, and loose soil around the burrow entrances that appears to have been excavated by small mammals. Ground squirrel activity in the mitigation area appears to have increased substantially in the past year. Numerous ground squirrel droppings can be found near most of the burrow entrances, and several natural ground squirrel burrows have appeared on or near the earth mounds. This natural squirrel activity should make the mitigation area more attractive to owls.

Burrow 8 is partially caved in. This burrow should be restored or decommissioned if possible in the future.

Other Wildlife Observed: GULL, RTHA, GCSP, CLSW, RWBL, HOFI, MODO, LOSH, Black-tailed Hare (scat), Ground Squirrel (burrows and scat)

Field Notes

Jason Yakich, Wildlife Biologist, WRA Inc.

LEGACY PROJECT, BURROWING OWL ARTIFICIAL BURROW MONITORING (13004)

Date/time: April 29, 2010 6:00 - 8:05 am

Purpose: Monitor BUOW burrows and perform maintenance

Monitors: Jason Yakich

Methods: Arrived during twilight to facilitate the detection of any Burrowing Owl (BUOW) foraging at the site. The Burrowing Owl mitigation area was approached on foot from the parking lot to the east. Upon arrival, a visual survey for Burrowing Owl (BUOW) around the mounds containing artificial burrows and the remainder of the greater capped landfill area, using binoculars (8x42). From 6:20 - 6:40, the mound to the NNE of the mitigation area was also surveyed as it appeared to provide the best BUOW habitat in the vicinity. Subsequently, the entrances to all artificial burrows were carefully examined for any sign of BUOW use (i.e., feces stains, regurgitated pellets, feathers). Burrow entrances were cleared of soil, vegetation, cobwebs and any other debris by hand. Several photos of the mitigation area and artificial burrows were taken. In addition, a general breeding bird survey was conducted across the entire mitigation area to assess the feasibility of mowing the entire area to control vegetation height.

Results: BUOW was not observed at the site or anywhere else surveyed in the area, and no BUOW sign was detected. The table below summarizes the findings relevant to individual burrows.

Result / Status	Burrow #
Entrance clear	6, 10 - 12, 14 - 22, 25 - 28
Entrance blocked by adjacent vegetation	2, 7 - 9, 13
Entrance blocked by earth	7, 8
Entrance blocked by cobwebs	9, 23
(Previously removed)	1, 24

The grasses and other vegetation in the vicinity of the burrows were highly variable in height, ranging from only a few inches to over two feet; the areas with the shortest vegetation were generally those whose vegetation was cut down during the previous March 2010 visit. No vegetation was cut during this visit. Taller vegetation (e.g. approximately four feet in height) such as mustard was present in some portions of the mitigation area. No indication of breeding bird activity was found anywhere in the mitigation area. Thus, mowing the entire area by America Center landscaping staff, to reduce vegetation height (improving habitat quality for BUOW), will be recommended. No ground squirrels or natural (i.e. squirrel-created) burrows were observed within the mitigation area.

Other Wildlife Observed At Site: American Kestrel, Western Gull (flyover), California Gull (flyover), Cliff Swallow, Barn Swallow, Vaux's Swift, White-throated Swift, Black-tailed Jackrabbit

Field Notes

Bill Stagnaro, WRA, Inc. Wildlife Biologist

LEGACY PROJECT, BURROWING OWL ARTIFICIAL BURROW MONITORING (13004)

Date: November 15, 2010

Purpose: Monitor BUOW burrows and perform maintenance.

Weather: Unseasonably warm, ~75F.

Monitors: Bill Stagnaro, Jason Yakich

Methods: Burrows were approached on foot from the parking lot to the east. A visual survey for Burrowing Owl (BUOW) was conducted using binoculars, both around the artificial burrows and the larger foraging area on top of the capped landfill. Burrow entrances were carefully examined for any sign of use (i.e., feces stains, regurgitated pellets, feathers). Burrow openings were cleared of vegetation and debris by hand.

Results: BUOW was not observed at the site, however two BUOW pellets, white wash and feathers were found near the entrance to burrow 21. The sign appeared to be fairly recent which would indicate an overwintering or migrating animal is present.

The majority of vegetation at the site is less than 6" tall, and the vegetation surrounding the burrows was even shorter, which is ideal for owl use. Some taller bushes and shrubs, such as coyote brush, were growing in the mitigation area. Ground squirrel sign and activity appeared to be much higher than in previous visits. A total of 37 ground squirrel burrows were observed in the mitigation area and an additional 10 burrows were present on the large earthen mound to the north of the parking area. Only one showed sign of BUOW.

Recommendations: Habitat at the site has improved due to the control of vegetation and an increase in ground squirrel activity. As natural burrows now exceed artificial burrows, it is recommended that mowing 2-3 times per year be performed in order to maintain ideal conditions for BUOW at both natural and artificial burrows. In addition, methods to control vegetation during the breeding season without impacting potentially breeding owls (e.g. grazing) should be explored. If possible, the sides of the mitigation area should be mowed too, as ground squirrels have moved into the north facing side and suitable habitat is available on the south facing side.

Field Notes

Spencer Badet, WRA, Inc. Biologist

LEGACY PROJECT, BURROWING OWL ARTIFICIAL BURROW MONITORING (13004)

Date/time: December 10, 2010 10:00AM - 12:00

Purpose: Monitor BUOW burrows and perform maintenance.

Weather: Breezy, cool, overcast, ~55F.

Monitors: Spencer Badet

Methods: The owl burrows were observed for two hours from the parking lot using 8x42 binoculars. The burrows were not approached on foot due to the presence of an owl (below).

Results: One adult male Burrowing Owl was observed standing next to burrow #26 for the duration of the survey, from 10AM to noon. The owl actively looked in all directions for predators, and hid behind an object when there was activity in the parking lot; however, the owl otherwise did not move from this location. Owl sign has been found in this area on the previous two monitoring trips (July 20 and November 15), and the owl appeared to feel comfortable and/or secure in this location. When cars drove up in the nearby parking lot (230 feet to the east) on three occasions, the owl did not fly away. Two or more ground squirrels actively traversed the burrow mounds and surrounding area during the survey; on several occasions the squirrels aggressively approached the owl, who repelled the squirrels by entering into a defensive posture, rather than flying away. A kestrel landed on a nearby perch and consumed an insect before flying close over the owl in what may have been an aggressive gesture. Again, the owl did not fly away. A Red-tailed Hawk also flew low over the owl as it circled the area, and again the owl did not fly away or seek cover. As has been the case on most previous visits to this site, one or two RTHA sat on a nearby transmission tower during the survey where they could look down on the owl burrow area.

Since an owl was using the site and showed no signs of leaving, the maintenance work that was planned for the day was not performed, as it would have disturbed the owl. This maintenance, which would have included cleaning burrow #8 and using a string trimmer to shorten the grass around the burrow entrances, was non-essential. Grass at the site is currently at an optimal height (6" or less), although it will grow rapidly in the coming months. While one burrow is caved in (#8), the remaining 25 burrows are in usable condition.

The apparent repeated presence of the owl at the site, and its apparent approval of the site as non-breeding habitat, suggest that the owl may attempt to breed at the site in 2011.

Other Wildlife Observed: GULL, RTHA, GCSP, CLSW, HOFI, MODO, AMKE, Ground Squirrel.

Field Notes

Bill Stagnaro, WRA, Inc. Wildlife Biologist

LEGACY PROJECT, BURROWING OWL ARTIFICIAL BURROW MONITORING (13004)

Date: November 15, 2010

Purpose: Monitor BUOW burrows and perform maintenance.

Weather: Unseasonably warm, ~75F.

Monitors: Bill Stagnaro, Jason Yakich

Methods: Burrows were approached on foot from the parking lot to the east. A visual survey for Burrowing Owl (BUOW) was conducted using binoculars, both around the artificial burrows and the larger foraging area on top of the capped landfill. Burrow entrances were carefully examined for any sign of use (i.e., feces stains, regurgitated pellets, feathers). Burrow openings were cleared of vegetation and debris by hand.

Results: BUOW was not observed at the site, however two BUOW pellets, white wash and feathers were found near the entrance to burrow 21. The sign appeared to be fairly recent which would indicate an overwintering or migrating animal is present.

The majority of vegetation at the site is less than 6" tall, and the vegetation surrounding the burrows was even shorter, which is ideal for owl use. Some taller bushes and shrubs, such as coyote brush, were growing in the mitigation area. Ground squirrel sign and activity appeared to be much higher than in previous visits. A total of 37 ground squirrel burrows were observed in the mitigation area and an additional 10 burrows were present on the large earthen mound to the north of the parking area. Only one showed sign of BUOW.

Recommendations: Habitat at the site has improved due to the control of vegetation and an increase in ground squirrel activity. As natural burrows now exceed artificial burrows, it is recommended that mowing 2-3 times per year be performed in order to maintain ideal conditions for BUOW at both natural and artificial burrows. In addition, methods to control vegetation during the breeding season without impacting potentially breeding owls (e.g. grazing) should be explored. If possible, the sides of the mitigation area should be mowed too, as ground squirrels have moved into the north facing side and suitable habitat is available on the south facing side.

APPENDIX B

MITIGATION SITE PHOTOGRAPHS



Photo Appendix

Top: Artificial burrows following vegetation removal (March 10, 2010).

Bottom: Overgrown mitigation area prior to mowing (April 29, 2010).



APPENDIX B

MITIGATION SITE PHOTOGRAPHS



Photo Appendix

Top: Feathers and droppings near burrow #21, in an area where a Burrowing Owl was observed in December (November 15, 2010).

Bottom: Feathers, droppings, and pellets near burrow #21 (November 15, 2010).



